

## A GIANT ACACIA FROM THE BRUNSWICK RIVER.

BY J. H. MAIDEN, F.L.S.

(Plate XXI.)

ACACIA BAKERI, sp.nov.

Attains the dimensions of a large forest tree, measuring up to 160\* feet in height, and from 2 to  $4\frac{1}{2}$  feet in diameter; stem sometimes buttressed. It is, as far as at present known, exclusively confined to brushes, as distinct from open forest. Branchlets at first terete but at length flattened, glabrous. Phyllodia sessile, broadly lanceolate, narrowed at each end, obtuse, mostly 3 to 4 inches long and 1 inch broad, but occasionally 6 inches long and 3 inches broad when they are acuminate and broad at the base; 3-nerved, with sometimes a short one terminating in a gland a little removed from the base, penniveined between the nerves, margins thickened and undulate, thinly coriaceous. Peduncles slender, 6 lines long, mostly in clusters of 3 to 10, forming numerous axillary racemes mostly exceeding the phyllodes, bearing a small loose head of few, pale coloured flowers, rarely as many as 20, mostly 4-merous. Calyx short, pubescent or softly villous, eventually separating into spathulate lobes. Petals pubescent, softly villous. Pod long, straight, flat, usually 8 inches long and 6 lines broad, thin, contracted somewhat between the seeds, shining. Seeds flat, ovate, longitudinal; funicle short and filiform, neither folded nor enlarged.

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\* A road party recently cut down one of these trees on Mullumbimby Creek, and it was found by measurement to be 140 feet high, and 3 feet 8 inches in diameter. The collector adds "On Tengoggin Mountain there are *plenty* of trees 20 or 30 feet higher."

*Hab.*—Tengoggin Mt. (1000 ft.), near Mullumbimby, Brunswick River, N.S.W.; also Mullumbimby Creek, a tributary of the Brunswick (W. Bäuerlen).

According to Bentham's classification this *Acacia* belongs to the series *Plurinerves*, sub-section *Dimidiatae*.

This is probably one of the largest of all the *Acacias*. It has been found in the Mountains measuring over 160 feet, with a trunk from 50-60 feet clear of limbs, and a diameter from 2 to 4 feet, and on the banks of creeks 140 feet high, and in some instances "so high that the leaves could not be seen" (distinguished).

The flowers are small, in loose racemes with fairly long peduncles. Branches pendulous. Phyllodes vertically flattened and also twisted towards the base, thin, quite glabrous. The pods are very difficult to procure owing to their ripening and falling in what is usually the wettest part of the year. In many instances pods were caught while falling from the trees when every seed was found to have begun to germinate.

They are very variable both in length and breadth, some being very broad and a little constricted between the seeds, while others from the same tree are very narrow and much constricted, the valves are all very thin.

The bark is quite distinct from *A. binervata*, its nearest ally. It is inclined to be smooth and exudes very little gum, as far as seen, and is reputed to be poor in tannin.

The timber is pale coloured right to the heart, as far as seen. It will be described subsequently.

The flowers, bark, seeds and timber all emit an alliaceous odour when fresh, reminding one of *Dysoxylon rufum*.

Its closest affinity is with *A. binervata*, which it resembles in the penniveined reticulations of the phyllodes and in the flowering racemes, but differs from it in individual flowers, pod and seed.

It ranks with *A. excelsa* in size and the shape of the seed and aril, but differs in the nervation of phyllodes, peduncles and flowers.

Its botanical position is perhaps between *A. binervata* and *A. flavescens*, which latter it approaches in nervation of its phyllodes. From the great size of this tree it was at first thought to be *A. excelsa*, but the nervation, size and shape of phyllodes as well as the inflorescence and pods do not agree with that species.

*Analysis Showing Affinities to and Differences from Cognate Species.*

A. EXCELSA.

*Size*: A large forest tree. *Branchlets* terete, glabrous. *Phyllodes* oblong, falcate, obtuse, mucronate, narrowed at the base, 2 to 3 inches long,  $\frac{1}{2}$  to  $\frac{3}{4}$  inch broad, thinly coriaceous, 5- to 7-nerved or faintly veined between them. *Inflorescence*: Peduncles solitary in pairs or clusters. *Flowers* 20 to 30, petals distinct, smooth; sepals distinct; 5-merous. *Pod* 3 lines broad. *Seed* ovate, longitudinal; funicle short and filiform, neither folded nor enlarged.

A. LAURIFOLIA, Willd.

*Size*: A tree. *Branchlets* scarcely angular. *Phyllodes* obliquely ovate-oblong, 7-8 nerved, emarginate at the apex, and oblique at the base. *Inflorescence*: Peduncles usually solitary. *Pod* falcate, moniliform.

A. BAKERI.

*Size*: A large brush tree. *Branchlets* flattened, angular. *Phyllodes* obtuse, broadly lanceolate, narrowed at both ends, 2 to 6 inches long,  $\frac{1}{2}$  to 3 inches broad, thinly coriaceous, 2- or 3-nerved, pinnately veined, margins thickened between the veins. *Inflorescence*: Loose, elongated panicles or racemes, peduncles in clusters. *Flowers* few, never more than 20, petals villous, sepals villous, spathulate, 4-merous. *Pod* nearly 6 lines broad, thin, straight. *Seed* ovate, longitudinal, funicle short and filiform, neither folded nor enlarged.

A. BINERVATA.

*Size*: A tree. *Branchlets* terete. *Phyllodes* as in *A. Bakeri*, but 3 nerves predominate. *Inflorescence*: Axillary racemes.

*Flowers* about 20, petals smooth, sepals glabrous. *Pod*  $\frac{1}{2}$  inch broad. *Seed* obovate, longitudinal, funicle folded and dilated under seed.

A. OVARIA.

*Size* : A small tree. *Branchlets* angular. *Phyllodes* oblong, falcate, 3-nerved, 2-3 inches long,  $\frac{1}{2}$  to 1 inch broad. *Inflorescence* : Racemes short. *Flowers* 30, globose, petals smooth. *Pod* hard, 3 to  $5\frac{1}{4}$  inches long,  $\frac{1}{2}$ - $\frac{3}{4}$  inch broad. *Seed* elongated, arillus almost encircling the seed in a double fold.

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EXPLANATION OF PLATE.

Plate XXI.

ACACIA BAKERI.

- Fig. 1.—Flowering twig.  
Fig. 2.—The large form of phyllode, common in this species.  
Figs. 3 and 4.—Individual flowers in progressive stages.  
Fig. 5.—Pistil.  
Fig. 6.—Pod.  
Fig. 7.—Seed *in situ*.  
Fig. 8.—Seed in longitudinal section.  
(Figs. 3, 4 and 5 enlarged.)